Level 3B PEQ Greenhouse Pricing Approach Scenarios

Summary: 17 March 2023

Contents

Introduction

Through taking a workshop-driven approach, a conceptual differentiated price structure for post-entry quarantine services has been developed, to support market consultation.

Background

As part of New Zealand's national biosecurity system and regulatory settings, the Ministry for Primary Industries (MPI) manages Level 3B (L3B) post-entry quarantine (PEQ) greenhouses in Tāmaki, Auckland.

MPI's L3B PEQ users are wide ranging, spanning large multinationals and industry bodies, to individual growers, breeders, and horticulture consultants. Together, the industry imports a range of plant material, including apples, berry fruit, citrus fruit, avocados, grapes, and kiwifruit into L3 PEQ facilities. Plant material is sourced from the wild and from breeding programmes around the world and can provide importers with significant commercial opportunities.

The quarantine period, the tests required, and the type of facility plant material must go through for quarantine depends on the plant species, the origin, the form of the plant material, and the respective Import Health Standard (IHS) issued under section 24A of the Biosecurity Act (1993). For plants processed through L3B PEQ, plant material may be quarantined between three and 24 months.

Since 2019, MPI has been the sole provider of New Zealand's L3B greenhouse space for high-risk and high-value imported plant material requiring PEQ. As of February 2023, MPI has 15 L3B greenhouse units at its Tāmaki site, with planned construction completion for an additional 12 L3B greenhouse units at its new Mt Albert site in 2023.

While operating costs have risen over the last decade due to general capital and wage inflation and escalating regulatory requirements, prices have remained the same since 2012. This has cause the contribution PEQ fees make to the overall operating costs of the facility to decrease over time, requiring the Crown to increase its own contribution. The introduction of L3B facilities at Mt Albert is also expected to increase operating costs.

In this context, MPI requested Deloitte to assist with understanding if differentiated pricing structures for PEQ services could be viable.

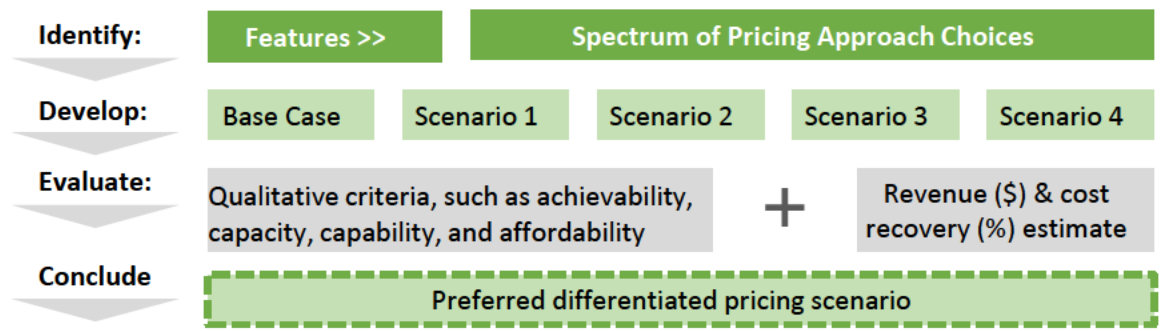
Approach

In order to develop a conceptual differentiated price structure for PEQ services, we took a workshop-driven approach, working closely with MPI staff to inform conceptual scenario development across three workshops.

To form the framework for scenario definition, a range of features for the pricing approach was agreed, and a spectrum of choices and other considerations available to MPI was developed.

Four differentiated pricing structure scenarios were created and assessed for achievability, capacity, strategic fit, and affordability. From this, two scenarios were selected for further consideration.

MPI drew on its experience to provide demand, utilisation, and pricing assumptions to inform annual revenue and cost recovery estimates for the Base Case, and selected scenarios. These estimates, along with an evaluation of risks and implementation considerations, form the basis of our key findings, offering MPI a conceptual differentiated price structure to support market consultation.



This report summarises key workshop outputs, describing the features of the scenarios assessed, the decision-making process applied to carry scenarios forward for further assessment, key assumptions, and risks, issues, and considerations requiring further investigation.

Key Findings

Key Findings

In this section, we outline the key advantages and disadvantages of the scenarios assessed, compared to the Base Case, and other considerations.

Base Case (the future status quo):

The Base Case presents a viable option for MPI to achieve improved cost recovery, through increasing the price point of general bookings when compared to current prices. If set at a monthly greenhouse price of $6,000, it could increase cost recovery to 51%.

A monthly greenhouse price of $6,000 balances affordability with cost recovery imperatives. This price setting, in particular, is based on MPI's considerations of market sustainability (using data from both "importers' willingness to pay" and "profit margins analyses" by industry), the PEQ customer base (a majority of which are 9(2)(ba)(i) importers), and price settings of other PEQ providers in NZ (ensuring MPI does not undercut lower-level quarantine providers).

While the Base Case assumes 100% utilisation based on industry feedback that additional capacity is required, utilisation cannot be predicted with certainty, and assumptions will need to be validated through market engagement.

Scenario 1 – Steady Revenue Predictability (rolling bookings at a premium rate):

Scenario 1 presents a feasible and relatively simple option for MPI to achieve improved cost recovery by offering rolling bookings at a premium price point to importers who are willing to pay. Certainty is provided for both importers and MPI, ensuring reliable revenue and utilisation over a minimum period for the greenhouses designated for rolling bookings.

This approach offers customers a choice and ensures those willing to pay more for ongoing access and to gain certainty that they can import with greater frequency, avoiding any wait-lists, can do so. It also means those who may not be able to afford a higher rate can join the general bookings process and will be charged the lower rate, currently proposed as $6,000.

If set at a monthly greenhouse price of $8,000 for rolling bookings, 55% cost recovery could be achieved. While this is only 4% higher than the base case (51%), if demand is high for rolling bookings the Ministry could seek to increase the price over time (e.g. at a higher rate than CPI or the period increase adopted for general bookings), which would increase the rate of costs recovered.

Scenario 1 proposes a differentiated price structure that is simple to implement and manage, streamlining operations and minimising administrative overhead. While several greenhouses would be designated for rolling bookings at a premium price point, this scenario allows for implementation flexibility, allowing the number of designated greenhouses to be adjusted based on demand. Additionally, there would be minimal modifications to the L3B Greenhouse Booking and Prioritisation Policy required to accommodate rolling bookings.

As long-term bookings are currently offered to some customers, this scenario's achievability and MPI's capacity to deliver have already been demonstrated.

Scenario 3: Tier-Based Pricing (tier-based preferential pricing structure, based on the new Booking and Prioritisation Policy tiers):

Scenario 3 offers MPI the option to achieve improved cost recovery by introducing a tiered pricing structure in alignment with the L3B Greenhouse Booking and Prioritisation Policy. This approach differentiates prices based on the priority assigned to each booking, with one pricing tier for Priorities 1 to 4 representing unique, urgent, remedial, or rare imports, and a second tier for Priorities 5 to 9 capturing regular and occasional imports.

Although the scenario was developed to encourage innovation and support the industry in alignment with MPI's Fit for a Better World roadmap, further evaluation revealed unintended consequences. The willingness-to-pay analysis conducted earlier indicates that 9(2)(b)(ii) would fall into the Priorities 5 to 9 tier, and would unlikely be able to afford the $8,000 per month price point, negatively impacting these smaller importers. Despite co-sharing being an option to mitigate the impact, the prioritisation and price disadvantages for customers in this category could harm MPI's reputation.

This could create a pricing barrier, and likely impact demand. Given that it is difficult to predict the likely level of demand and utilisation certainty for this option, for this scenario utilisation was presented as an indicative range, from 65% to 100%. This would result in a cost recovery range of 45% – 66%. The working group believes there is a high likelihood the actual result would be on the lower end of this range, meaning it runs the risk of driving less revenue than the Base Case, and is likely to not be as successful as Scenario 1.

Key Findings

In this section, we outline the key advantages and disadvantages of the scenarios assessed, compared to the Base Case, and other considerations.

Scenario 3: Tier-Based Pricing (Continued):

While a tiered pricing approach would not affect daily operations, it may require additional administrative effort to work with customers on understanding the impacts of tiered pricing. Additionally, there is uncertainty regarding the current system's capability to support tiered pricing, necessitating further investigation.

Preferential Access Optionality:

Including preferential access as a scenario add-on offers MPI the option to achieve improved cost recovery by allowing importers to pay a premium for access and avoid the wait list. While this feature can potentially provide benefits to those importers willing to pay, and increase cost recovery, it poses significant booking challenges that may outweigh the benefit received.

Compared to offering rolling bookings, offering a ‘skip-the-line’ service introduces additional complexities, as MPI needs to ensure customers can access the designated greenhouses within a set timeframe without waiting. Preferential access offers less flexibility to MPI from a demand perspective, making it difficult to anticipate demand for ring-fenced greenhouses at a premium price, which may require reallocating greenhouses for general bookings if they remain unused. Furthermore, the preferential booking optionality introduces a need to consider broader changes to the L3B Greenhouse Booking and Prioritisation Policy, taking into account the above complexities.

Assuming the monthly greenhouse price for preferential access is set at $12,000, the added complexity of this offering would yield a gain of circa 4% for Scenario 1, and 7% for Scenario 3.

Summary:

Based on the workshops and analysis with MPI staff, Scenario 1 stands out as the most effective and feasible differentiated price structure for MPI to achieve increased cost recovery at this point in time, with the potential to also include preferential access at an additional price premium, if upcoming market consultation indicates sufficient interest.

Many of those interviewed during earlier Willingness to Pay analysis indicated they had a strong desire to have ongoing access, essentially back-to-back bookings, to enable them to import with greater frequency and to ensure they did not have a long wait time when trying to book PEQ L3B quarantine space. The uncertainty lies in how many of the existing or future customers will still have the same interest at a higher price point such as $8,000 per greenhouse, per month. While this price appears a sensible starting point, MPI will have the flexibility to increase or decrease this over time, adjusting based on the demand and level of interest that actually occurs.

Preferential access pricing could be included in this scenario, noting it might be more complicated to offer given it requires ensuring customers can gain access to quarantine space in a timely manner, while potentially increasing operational and reputational risks.

While Scenario 1 offers a relatively simple, cost-effective and flexible approach to adjusting greenhouse allocations in response to demand, it should also be considered that in moving forward with any differentiated pricing solution, pricing flexibility remains and prices are not fixed. Contingency approaches can still be considered in the event demand is higher or lower than expected, and pricing adjustments can be made without requiring a wholesale change to the adopted method.

To maintain transparency in its pricing structure, MPI should communicate its full operating costs for L3B facilities to the market, as well as the subsidies provided despite the increased costs.

In conclusion, by implementing Scenario 1, MPI can achieve enhanced cost recovery while securing revenue and utilisation certainty, and providing a premium offering to those importers who are willing to pay.

Scenario Definition

Scenario Definition | Features

A range of pricing approach features was agreed, from which a spectrum of choices or other considerations available to MPI were developed to form the framework for scenario definition.

Feature	Definition
Full Greenhouse	*Greenhouse booked in its entirety for use by a single importer*
Co-Sharing	*Discrete benches within a greenhouse booked by importers, resulting in a shared greenhouse space*
Rolling Annual Bookings	*Securing long-term access to facilities for an agreed duration*
Preferential Access	*Price premium paid by importers to prioritise booking and reduce wait time*
Preferential Pricing	*Adjusted pricing for importers that meet specific requirements*
Booking Allocations	*Approach taken to prioritise facility access*

Scenario | Base Case

The pricing approach alternatives that define the Base Case Scenario, or *the future status quo,* as confirmed through Workshop 1.

Feature	Pricing Approach Choices					
Full Greenhouse	**Flat fee:** $ per greenhouse, per month	**Volume-based:** Price premium $ per greenhouse, per month for multiple greenhouses	**Spare capacity discount:** A discounted rate for benches that become available early	**Levels of service:** Differentiated cost per crop type (some crops take more time/effort to tend)	**Pricing increase:** Pricing escalation, annual price review (e.g. annual CPI increase)	**Seasonal pricing:** Higher pricing for importing outside of the natural seasonal cycle
Co-Sharing	**Primary contractor:** $ per greenhouse, per month; Single entity contracts with MPI to book GH; coordinates own co-sharing	**Flat fee:** $ per bench, per month	**Spare capacity discount:** A discounted rate for benches that become available early	**Volume-based:** Price premium $ per bench, per month for [#] benches	**Ministry Connector:** Acts as broker between customers, and coordinates co-sharing of greenhouses	
Rolling Bookings	**No rolling annual bookings**	**Flat discount:** A fixed $ or % discount applied to a long-term lease with a minimum period	**Flat premium:** A fixed $ or % premium applied to a long-term lease with a minimum period	**Tiered discount:** Different levels of discounts based on booking length	**Tiered premium:** Different levels of premiums based on booking length	**Fixed** Fixed pricing for a longer period of time, for select customers
Preferential Access	**No preferential access**	**Flat access fee:** A fixed $ or % fee paid as a deposit for a prioritised booking	**Increased Monthly Fee:** A fixed $ or % fee applied to the monthly greenhouse fee for priority access	**Priority tiers:** Different levels of priority access, each with a corresponding fee	**Dynamic pricing:** Adjusting the fee based on current demand	
Preferential Pricing	**No preferential pricing**	**Reduced rates:** Offering discounted rates for [small importers] or [specific industries] or under urgent circumstances	**Premium rates:** Offering higher rates for [large importers] or [established / high-value industries]	**Tiered based pricing:** Different prices linked to factors within booking prioritisation system		
Booking Allocations* (Continues to apply to general bookings)	**L3B Greenhouse Booking & Prioritisation Policy:** Priority designation assessed in alignment with new policy	**First-come, first-served basis:** Allowing importers to join wait-list on first-come, first-served basis	**Industry prioritisation:** Priority designation assessed based on industry			

Key

Selected

Potential add-on

Scenario 1 | Steady Revenue Predictability

Scenario 1 drives predictability for MPI through offering rolling bookings to importers at a premium rate, providing capacity and revenue surety.

Feature	Pricing Approach Choices					
Full Greenhouse	**Flat fee:** $ per greenhouse, per month	**Volume-based:** Price premium $ per greenhouse, per month for multiple greenhouses	**Spare capacity discount:** A discounted rate for benches that become available early	**Levels of service:** Differentiated cost per crop type (some crops take more time/effort to tend)	**Pricing increase:** Pricing escalation, annual price review (e.g. annual CPI increase)	**Seasonal pricing:** Higher pricing for importing outside of the natural seasonal cycle
Co-Sharing	**Primary contractor:** $ per greenhouse, per month; Single entity contracts with MPI to book GH; coordinates own co-sharing	**Flat fee:** $ per bench, per month	**Spare capacity discount:** A discounted rate for benches that become available early	**Volume-based:** Price premium $ per bench, per month for [#] benches	**Ministry Connector:** Acts as broker between customers, and coordinates co-sharing of greenhouses	
Rolling Bookings	**No rolling annual bookings**	**Flat discount:** A fixed $ or % discount applied to a long-term lease with a minimum period	**Flat premium:** A fixed $ or % premium applied to a long-term lease with a minimum period	**Tiered discount:** Different levels of discounts based on booking length	**Tiered premium:** Different levels of premiums based on booking length	**Fixed** Fixed pricing for a longer period of time, for select customers
Preferential Access	**No preferential access**	**Flat access fee:** A fixed $ or % fee paid as a deposit for a prioritised booking	**Increased Monthly Fee:** A fixed $ or % fee applied to the monthly greenhouse fee for priority access	**Priority tiers:** Different levels of priority access, each with a corresponding fee	**Dynamic pricing:** Adjusting the fee based on current demand	
Preferential Pricing	**No preferential pricing**	**Reduced rates:** Offering discounted rates for [small importers] or [specific industries] or under urgent circumstances	**Premium rates:** Offering higher rates for [large importers] or [established / high-value industries]	**Tiered based pricing:** Different prices linked to factors within booking prioritisation system		
Booking Allocations* (Continues to apply to general bookings)	**L3B Greenhouse Booking & Prioritisation Policy:** Priority designation assessed in alignment with new policy	**First-come, first-served basis:** Allowing importers to join wait-list on first-come, first-served basis	**Industry prioritisation:** Priority designation assessed based on industry			

Key

Selected

Potential add-on

Scenario 2 | Cost of Care

Scenario 2 drives cost recovery by providing differentiated costing per crop type and season, in alignment with the time, effort, and resources required to tend to the crop.

Feature	Pricing Approach Choices					
Full Greenhouse	**Flat fee:** $ per greenhouse, per month	**Volume-based:** Price premium $ per greenhouse, per month for multiple greenhouses	**Spare capacity discount:** A discounted rate for benches that become available early	**Levels of service:** Differentiated cost per crop type (some crops take more time/effort to tend)	**Pricing increase:** Pricing escalation, annual price review (e.g. annual CPI increase)	**Seasonal pricing:** Higher pricing for importing outside of the natural seasonal cycle
Co-Sharing	**Primary contractor:** $ per greenhouse, per month; Single entity contracts with MPI to book GH; coordinates own co-sharing	**Flat fee:** $ per bench, per month	**Spare capacity discount:** A discounted rate for benches that become available early	**Volume-based:** Price premium $ per bench, per month for [#] benches	**Ministry Connector:** Acts as broker between customers, and coordinates co-sharing of greenhouses	
Rolling Bookings	**No rolling annual bookings**	**Flat discount:** A fixed $ or % discount applied to a long-term lease with a minimum period	**Flat premium:** A fixed $ or % premium applied to a long-term lease with a minimum period	**Tiered discount:** Different levels of discounts based on booking length	**Tiered premium:** Different levels of premiums based on booking length	**Fixed** Fixed pricing for a longer period of time, for select customers
Preferential Access	**No preferential access**	**Flat access fee:** A fixed $ or % fee paid as a deposit for a prioritised booking	**Increased Monthly Fee:** A fixed $ or % fee applied to the monthly greenhouse fee for priority access	**Priority tiers:** Different levels of priority access, each with a corresponding fee	**Dynamic pricing:** Adjusting the fee based on current demand	
Preferential Pricing	**No preferential pricing**	**Reduced rates:** Offering discounted rates for [small importers] or [specific industries] or under urgent circumstances	**Premium rates:** Offering higher rates for [large importers] or [established / high-value industries]	**Tiered based pricing:** Different prices linked to factors within booking prioritisation system		
Booking Allocations* (Continues to apply to general bookings)	**Booking & Prioritisation Policy:** Priority designation assessed in alignment with new policy	**First-come, first-served basis:** Allowing importers to join wait-list on first-come, first-served basis	**Industry prioritisation:** Priority designation assessed based on industry			

Key

Selected

Potential add-on

Scenario 3 | Tier-Based Pricing

Scenario 3 offers preferential pricing, where a tiered pricing structure aligns costs with the Booking and Prioritisation Policy, based on booking urgency, uniqueness, and risk.

Feature	Pricing Approach Choices					
Full Greenhouse	**Flat fee:** $ per greenhouse, per month	**Volume-based:** Price premium $ per greenhouse, per month for multiple greenhouses	**Spare capacity discount:** A discounted rate for benches that become available early	**Levels of service:** Differentiated cost per crop type (some crops take more time/effort to tend)	**Pricing increase:** Pricing escalation, annual price review (e.g. annual CPI increase)	**Seasonal pricing:** Higher pricing for importing outside of the natural seasonal cycle
Co-Sharing	**Primary contractor:** $ per greenhouse, per month; Single entity contracts with MPI to book GH; coordinates own co-sharing	**Flat fee:** $ per bench, per month	**Spare capacity discount:** A discounted rate for benches that become available early	**Volume-based:** Price premium $ per bench, per month for [#] benches	**Ministry Connector:** Acts as broker between customers, and coordinates co-sharing of greenhouses	
Rolling Bookings	**No rolling annual bookings**	**Flat discount:** A fixed $ or % discount applied to a long-term lease with a minimum period	**Flat premium:** A fixed $ or % premium applied to a long-term lease with a minimum period	**Tiered discount:** Different levels of discounts based on booking length	**Tiered premium:** Different levels of premiums based on booking length	**Fixed** Fixed pricing for a longer period of time, for select customers
Preferential Access	**No preferential access**	**Flat access fee:** A fixed $ or % fee paid as a deposit for a prioritised booking	**Increased Monthly Fee:** A fixed $ or % fee applied to the monthly greenhouse fee for priority access	**Priority tiers:** Different levels of priority access, each with a corresponding fee	**Dynamic pricing:** Adjusting the fee based on current demand	
Preferential Pricing	**No preferential pricing**	**Reduced rates:** Offering discounted rates for [small importers] or [specific industries] or under urgent circumstances	**Premium rates:** Offering higher rates for [large importers] or [established / high-value industries]	**Tiered based pricing:** Different prices linked to factors within booking prioritisation system		
Booking Allocations* (Continues to apply to general bookings)	**L3B Greenhouse Booking & Prioritisation Policy:** Priority designation assessed in alignment with new policy	**First-come, first-served basis:** Allowing importers to join wait-list on first-come, first-served basis	**Industry prioritisation:** Priority designation assessed based on industry			

Key

Selected

Potential add-on

Scenario 4 | Customer Care and Co-Share

Scenario 4 drives maximum capacity utilisation through a focus on promoting co-sharing.

Feature	Pricing Approach Choices					
Full Greenhouse	**Flat fee:** $ per greenhouse, per month	**Volume-based:** Price premium $ per greenhouse, per month for multiple greenhouses	**Spare capacity discount:** A discounted rate for benches that become available early	**Levels of service:** Differentiated cost per crop type (some crops take more time/effort to tend)	**Pricing increase:** Pricing escalation, annual price review (e.g. annual CPI increase)	**Seasonal pricing:** Higher pricing for importing outside of the natural seasonal cycle
Co-Sharing	**Primary contractor:** $ per greenhouse, per month; Single entity contracts with MPI to book GH; coordinates own co-sharing	**Flat fee:** $ per bench, per month	**Spare capacity discount:** A discounted rate for benches that become available early	**Volume-based:** Price premium $ per bench, per month for [#] benches	**Ministry Connector:** Acts as broker between customers, and coordinates co-sharing of greenhouses	
Rolling Bookings	**No rolling annual bookings**	**Flat discount:** A fixed $ or % discount applied to a long-term lease with a minimum period	**Flat premium:** A fixed $ or % premium applied to a long-term lease with a minimum period	**Tiered discount:** Different levels of discounts based on booking length	**Tiered premium:** Different levels of premiums based on booking length	**Fixed** Fixed pricing for a longer period of time, for select customers
Preferential Access	**No preferential access**	**Flat access fee:** A fixed $ or % fee paid as a deposit for a prioritised booking	**Increased Monthly Fee:** A fixed $ or % fee applied to the monthly greenhouse fee for priority access	**Priority tiers:** Different levels of priority access, each with a corresponding fee	**Dynamic pricing:** Adjusting the fee based on current demand	
Preferential Pricing	**No preferential pricing**	**Reduced rates:** Offering discounted rates for [small importers] or [specific industries] or under urgent circumstances	**Premium rates:** Offering higher rates for [large importers] or [established / high-value industries]	**Tiered based pricing:** Different prices linked to factors within booking prioritisation system		
Booking Allocations* (Continues to apply to general bookings)	**Booking & Prioritisation Policy:** Priority designation assessed in alignment with new policy	**First-come, first-served basis:** Allowing importers to join wait-list on first-come, first-served basis	**Industry prioritisation:** Priority designation assessed based on industry			

Key

Selected

Potential add-on

Preliminary Scenario Assessment

Preliminary Scenario Assessment

Through an assessment of achievability, capacity, strategic fit, and affordability / cost-recovery in Workshop 2, Scenarios 2 and 4 were not carried forward for further consideration.

	Scenario 1 – Steady Revenue Predictability	Scenario 2 – Cost of Care	Scenario 3 – Tier-Based Pricing	Scenario 4 – Customer Care & Co-Share
	Drives predictability for MPI through offering rolling bookings to importers at a premium rate, providing capacity and revenue surety	*Drives cost recovery by providing differentiated costing per crop type and season, in alignment with the time, effort, and resources required to tend to the crop*	*Offers preferential pricing, where a tiered pricing structure aligns costs with the Booking and Prioritisation Policy, based on booking urgency, uniqueness, and risk*	*Drives maximum capacity utilisation through a focus on promoting co-sharing*
Achievability *Matches MPI's ability to deliver successfully*	✓ **Achievable** to allocate a number of greenhouses for rolling bookings / long-term leases ✓ **Preparation of quotes** and invoicing is relatively **simple**	× There are **complexities** associated with assessing the cost to tend to various crop types, and **uncertainty exists** as to the current availability of **underlying data to inform pricing**	✓ **Achievable** to link tiered pricing to the L3B Greenhouse Booking and Prioritisation Policy	? The **legal risks** associated with MPI acting as a co-sharing connector need to be better understood. × There may be **reputational risks**, should co-sharing coordinated by MPI results in adverse impacts to crops
Capacity *MPI has the capacity to deliver this service*	✓ Demonstrated **capacity** and **capability** through current long-term bookings available to customers	× There will be **additional administration** effort associated with quote preparation	? As current systems are manual, a review may be required to understand capability	× There will be **additional administration** effort associated with quote preparation
Strategic Fit *Meets the related business needs and requirements*	✓ **Strategic alignment**, given that long-term bookings are currently offered to customers	✓ Recovering costs associated with higher levels of crop care aligns with business needs	✓ A tier-based pricing approach aligns with MPI's *Fit for a Better World* roadmap	✓ The role of MPI acting as a co-sharing connector aligns with business goal of **supporting small importers**
Affordability / Cost Recovery Impact *The incremental or net benefit impact, accounting for additional revenue less cost to deliver*	✓ **Minimal cost** to deliver ✓ Offers a choice ✓ **Demand and revenue certainty** will improve cost recovery	× Given the higher administration costs, and the relatively low variability between care of different crop types, there is likely an insignificant net benefit	✓ No additional costs to deliver ✓ Charging a **higher price** for a larger portion of greenhouses resulting in the potential for greater revenue × **Does not offer customers a choice** (with the exception of the preferential access add-on), and the higher price does not explicitly target larger organisations who may be able or willing to pay more	× While spare capacity discounts could maximise greenhouse utilisation, this **would only be relevant to a low demand** environment. × The **risk and administration costs** of MPI acting as a co-sharing connector, yield **insignificant net benefit.**

Scenario Impacts and Assumptions

Impacts| Base Case

Key assumptions were provided by MPI personnel to inform annual revenue estimates and cost recovery.

Assumptions	Base Case Scenario
Total Greenhouses	26 greenhouses
Demand	All greenhouses allocated for general bookings
Utilisation	100% of greenhouses utilised
Price	$6,000 per greenhouse, per month
Annual Revenue Calculation	12 months x 26 greenhouses x $6,000 = **$1,872,000 per annum**
Cost Recovery	51% *of the total annual cost of $3,647,311 to operate 27* greenhouses*

Commentary

All assumptions to inform annual revenue estimates were provided by MPI and agreed by the project working group, with consideration given to recent cost recovery work, including willingness to pay and margin analysis. The revenue estimate provided is indicative only, and is for the purpose of providing a comparison between the scenarios under consideration.

The Base Case assumes 26 greenhouses are available for general bookings, in alignment with the L3B Greenhouse Booking and Prioritisation Policy. The 26 greenhouses comprise the 15 units at Tāmaki and the 12 units at Mt Albert, maintaining one unit for positive controls. The base case assumes current biological indexing requirements are removed and replaced with other methods, making six units currently used for biological indexing available to customers.

The Base Case assumes 100% greenhouse utilisation, based on industry feedback that additional L3B PEQ capacity is required.

MPI is considering a monthly greenhouse price of $6,000, which balances affordability with cost recovery imperatives. This price setting, in particular, is based on MPI's considerations of market sustainability (using data from both "importers' willingness to pay" and "profit margins analyses" by industry), the PEQ customer base (a majority of which are 9(2)(ba)(i) importers), and price settings of other PEQ providers in NZ (ensuring MPI does not undercut lower-level quarantine providers). One month of downtime and maintenance is factored into the monthly price, enabling annual costs to be recovered over an 11-month period.

It is also assumed annual CPI or similar periodic price adjustments will be made in order to maintain cost recovery levels.

**The 27 greenhouses includes one greenhouse maintained for positive controls. This is built into the cost to be recovered from the 26 greenhouses available for use.*

Impacts| Scenario 1 – Steady Revenue Predictability

Key assumptions were provided by MPI personnel to inform annual revenue estimates and cost recovery.

Assumptions	Scenario 1 – Steady Revenue Predictability
Total Greenhouses	26 greenhouses
Demand	General bookings: 20 greenhouses Rolling bookings: 6 greenhouses
Utilisation	100% of greenhouses utilised
Price	General bookings: $6,000 per greenhouse, per month Rolling bookings: $8,000 per greenhouse, per month
Annual Revenue Calculation	General: 12 months x 20 GHs x $6,000 = $1,440,000 Rolling: 12 months x 6 GHs x $8,000 = $576,000 **$2,016,000 per annum**
Cost Recovery	55% *of the total annual cost of $3,647,311 to operate 27* greenhouses*

Commentary

Scenario 1 allows importers to secure rolling bookings, or long-term greenhouse leases with a minimum period, by paying a monthly price premium. The assumptions for Scenario 1 are consistent with the Base Case, except for demand and price.

MPI estimated demand for rolling bookings at six greenhouses, based on the current wait-list and a review of those importers currently using L3B PEQ facilities for longer-term bookings.

The price for general greenhouse bookings is maintained at $6,000 per month, in alignment with the Base Case.

While the option for importers to secure rolling bookings is a premium service, full cost recovery was deemed unrealistic due to the adverse impact it would have on demand. Instead, it was agreed the industry would respond better to a partially subsidised price of $8,000 per greenhouse, per month – a price premium of $2,000 to gain ongoing access and certainty of quarantine space.

It is also assumed annual CPI or similar periodic price adjustments will be made on the general booking and rolling booking prices in order to maintain the same cost recovery level.

**The 27 greenhouses includes one greenhouse maintained for positive controls. This is built into the cost to be recovered from the 26 greenhouses available for use.*

Impacts| Scenario 3 – Tier-Based Pricing

Key assumptions were provided by MPI personnel to inform annual revenue estimates and cost recovery.

Assumptions	Scenario 3 – Tiered Based Pricing	
Total Greenhouses	26 greenhouses	
Demand	Priorities 1 to 4 (Tier 1): 3 greenhouses Priorities 5 to 9 (Tier 2): 23 greenhouses	
Utilisation	**Utilisation – low estimate (more likely)** Tier 1: 100% of greenhouses utilised Tier 2: 65% of greenhouses utilised	**Utilisation – high estimate (less likely)** 100% of greenhouses utilised
Price	Priorities 1 to 4 (Tier 1): $6,000 per greenhouse, per month Priorities 5 to 9 (Tier 2): $8,000 per greenhouse, per month	
Annual Revenue Calculation	Tier 1: 12 mth x 3 GHs x **$6,000** = $216,000 Tier 2: 12 mth x 23 GHs x **$8,000** x 65% = $1,435,200 **$1,651,200**	Tier 1: 12 mth x 3 GHs x **$6,000** = $216,000 Tier 2: 12 mth x 23 GHs x **$8,000** = $2,208,000 **$2,424,000**
Cost Recovery	45% *of the total annual cost of $3,647,311 to operate 27* greenhouses*	66% *of the total annual cost of $3,647,311 to operate 27* greenhouses*

Commentary

Scenario 3 reflects a tiered pricing structure that aligns prices with the L3B Greenhouse Booking and Prioritisation Policy.

The assumptions for Scenario 3 are consistent with the Base Case, except for demand, price, and utilisation.

A two-tier pricing structure was developed, differentiating prices for Priorities 1 to 4 (Tier 1), and Priorities 5 to 9 (Tier 2), where Priorities 1 to 4 represent bookings that are unique, urgent, remedial, or rarely imported.

MPI estimated demand for Tier 1 at three greenhouses, based on the current wait-list, assuming the remaining greenhouses are allocated for bookings assessed as Tier 2.

To align with MPI's Fit for a Better World roadmap, and to encourage unique imports and innovation, the price for bookings assessed as Tier 1 was set at the subsidised monthly greenhouse cost of $6,000 per month. Regular and occasional imports assessed as Tier 2 were set at the partially subsidised price of $8,000 per month.

To take into consideration the impact the higher Tier 2 price may have on demand, a demand range was adopted from 65% to 100%. Based on MPI's wider cost recovery analysis and consideration of the existing customer wait-list, it is expected actual demand is much more likely to be closer to the lower end of this range.

**The 27 greenhouses includes one greenhouse maintained for positive controls. This is built into the cost to be recovered from the 26 greenhouses available for use.*

Impacts| Preferential Access Optionality

Key assumptions were provided by MPI staff to inform annual revenue estimates and cost recovery.

Assumptions	Scenario 1 – Steady Revenue Predictability + Preferential Access	Scenario 3 – Tier-Based Pricing + Preferential Access
Total Greenhouses	26 greenhouses	26 greenhouses
Demand	General bookings: 20 greenhouses Rolling bookings: 3 greenhouses Preferential access: 3 greenhouses	Priorities 1 to 4 (Tier 1): 3 greenhouses Priorities 5 to 9 (Tier 2) 17 greenhouses Preferential access: 6 greenhouses
Utilisation (%)	100%	Tier 1: 100% of greenhouses utilised Tier 2: 65% of greenhouses utilised Preferential Access: 100% of greenhouses utilised
Price	General bookings: $6,000 per greenhouse per mth Rolling bookings: $8,000 per greenhouse per mth Preferential access: $12,000 per greenhouse per mth	Tier 1: $6,000 per greenhouse per mth Tier 2: $8,000 per greenhouse per mth Preferential access: $12,000 per greenhouse per mth
Annual Revenue Calculation	General: 12 mth x 20 GHs x **$6,000** = $1,440,000 Rolling: 12 mth x 3 GHs x **$8,000** = $288,000 Preferential: 12 mth x 3 GHs x **$12,000** = $432,000 **$2,160,000**	Tier 1: 12 mth x 3 GHs x **$6,000** = $216,000 Tier 2: 12 mth x 20 GHs x **$8,000** x 65% = $1,248,000 Preferential: 12 mth x 3 GHs x **$12,000** = $432,000 **$1,896,000**
Cost Recovery	59% *of the total annual cost of $3,647,311 to operate 27* greenhouses*	52% lower bound (up to a less likely upper bound of 70%) *of the total annual cost of $3,647,311 to operate 27* greenhouses*

Commentary

The option to include preferential access within Scenario 1 and 3 was assessed, allowing importers to pay a premium for access and avoid the wait list.

Demand for three greenhouses allocated to preferential bookings was assumed for both Scenarios 1 and 3.

For Scenario 1, it was assumed that the introduction of an additional premium add-on would impact the demand for rolling bookings, therefore demand for rolling bookings was reduced from six to three under this option.

Preferential access is more complicated to manage and deliver, and may incur additional administration costs. Therefore cost recovery could be less than represented here.

**The 27 greenhouses includes one greenhouse maintained for positive controls. This is built into the cost to be recovered from the 26 greenhouses available for use.*

Risks & Issues

Risk & Issues | Scenario 1

The risks and issues associated with scenario implementation were considered.

Scenario 1 *Steady Revenue Predictability*	**Risks and Issues**
Operational *Risk that operating costs vary from budget and performance standards slip or that a service cannot be provided*	There were no significant operational risks identified for Scenario 1, given the inclusion of rolling bookings does not impact day-to-day facility operations.
Availability and Performance *Risk that quantum of service provided is less than that required under the contract*	If demand for rolling bookings is not met, there will likely be a decision point at which greenhouses reserved for rolling bookings are reallocated for general bookings. If an importer requests a rolling booking after that point, it may not be possible to provide the service as offered.
Demand and Volume *Risk that demand or actual usage for a service does not match levels planned*	The greenhouses allocated for rolling bookings may not match demand levels, resulting in misalignment between planned and actual revenue estimates. Demand may be impacted should industry view pricing for both rolling and general bookings as too high, resulting in importers choosing to import less or assess alternative import strategies.
Technology *Risk that changes in technology result in services being provided using sub-optimal technical solutions*	There were no significant technology risks identified for Scenario 1, given the inclusion of rolling bookings does not require any technological or system changes to implement.
Reputational *Risk that business fails to meet expectations of its customers/stakeholders and is thus negatively perceived*	There is a risk customers unable to afford rolling bookings perceive the service as unfair, potentially harming MPI's reputation.
External Non-Systemic *Risks that affect all society and are not connected directly to the project*	Allocation of greenhouses for rolling bookings may yield reduced flexibility and insufficient greenhouse space in the event of a biosecurity response.
Other	There may be wider impacts from a change in approach to L3B pricing, impacting pricing for other services (relativity).

Risk & Issues | Scenario 3

The risks and issues associated with scenario implementation were considered.

Scenario 3 *Tiered Based Pricing*	**Risks and Issues**
Operational *Risk that operating costs vary from budget and performance standards slip or that a service cannot be provided*	There were no significant operational risks identified for Scenario 3, given the inclusion of rolling bookings does not impact day-to-day facility operations.
Availability and Performance *Risk that quantum of service provided is less than that required under the contract*	There were no significant availability and performance risks identified for Scenario 3, given a tiered pricing approach does not impact the services provided.
Demand and Volume *Risk that demand or actual usage for a service does not match levels planned*	Small importers and industries may be unable to pay higher tier price, which may negatively impact demand and the Ministry's reputation.
Technology *Risk that changes in technology result in services being provided using sub-optimal technical solutions*	Uncertainty exists as to current system capabilities to accommodate tiered pricing. There may be delay to pricing approach implementation or additional costs associated with system upgrades.
Reputational *Risk that business fails to meet expectations of its customers/stakeholders and is thus negatively perceived*	The majority of customers fall within booking priorities five to nine. These customers would be impacted through both lower priority bookings, and higher prices.
External Non-Systemic *Risks that affect all society and are not connected directly to the project*	There may be insufficient greenhouse space in the event of a biosecurity response.
Other	There may be wider impacts from a change in approach to L3B pricing, impacting pricing for other services (relativity). While this scenario was initially developed to support the industry and encourage innovation, there may be unintended consequences of implementing a tiered pricing approach. Large importers may benefit from the reduced price through bringing in unique imports, or the tiered pricing structure may be challenged by those importers required to pay a higher price.

Risk & Issues | Preferential Access Optionality

The risks and issues associated with including preferential access within both Scenarios 1 and 3 were considered.

Preferential Access – Add-on	Risks and Issues
Operational *Risk that operating costs vary from budget and performance standards slip or that a service cannot be provided*	Although preferential pricing does not have an impact on daily operations, it may necessitate extra administrative effort to manage bookings.
Availability and Performance *Risk that quantum of service provided is less than that required under the contract*	If demand for preferential access is not met, there will likely be a decision point at which greenhouses reserved for preferential access are reallocated for general bookings. If an importer requests preferential access after that point, it may not be possible to provide the service as offered.
Demand and Volume *Risk that demand or actual usage for a service does not match levels planned*	The greenhouses allocated for preferential access may not match demand levels, resulting in misalignment between planned and actual revenue estimates. Given the price charged needs to be higher for this service, there may be very limited demand at a potential monthly greenhouse price of $12,000.
Technology *Risk that changes in technology result in services being provided using sub-optimal technical solutions*	There were no significant technology risks identified for the preferential access optionality.
Reputational *Risk that business fails to meet expectations of its customers/stakeholders and is thus negatively perceived*	There is a risk that customers unable to afford preferential access perceive the service as unfair, potentially harming MPI's reputation. Preferential access customers may have higher expectations due to the premium price paid for the service. This poses a risk of reputational damage to MPI should there be an inability to meet these expectations.
External Non-Systemic *Risks that affect all society and are not connected directly to the project*	Allocation of greenhouses for preferential access may yield reduced flexibility and insufficient greenhouse space in the event of a biosecurity response.
Other	Potentially complex amendments to the L3B Greenhouse Booking and Prioritisation Policy must be considered.

Summary

Summary

In this section, we outline the key advantages and disadvantages of the scenarios carried forward for assessment, compared to the Base Case, and other considerations.

Scenarios	Key Advantages	Key Challenges	Cost Recovery*	
Base Case *The future status quo*	• Viable option for MPI to achieve improved cost recovery through increasing the price point of general bookings when compared to current prices	• No specific challenges identified	51%	
Scenario 1: Steady Revenue Predictability *Drives predictability for MPI through offering rolling bookings to importers at a premium rate, providing capacity and revenue surety*	• Feasible and simple option for MPI to achieve improved cost recovery • Certainty is provided for both importers and MPI, ensuring reliable access, revenue and utilisation over a minimum period for greenhouses designated for rolling bookings • Allows operating flexibility, where the number of greenhouses allocated for rolling bookings can be adjusted based on demand • Provides options for importers – those that can pay more, and are willing to for ongoing access, can do so	• Minimal modifications to the L3B Greenhouse Booking and Prioritisation Policy required to accommodate rolling bookings • Relatively simple to implement and operate	55%	
Scenario 3: Tier-Based Pricing *Offers preferential pricing, where a tiered pricing structure aligns costs with the Booking and Prioritisation Policy, based on booking urgency, uniqueness, and risk*	• Under the high-utilisation assumption, it could achieve improved cost recovery, as the majority of customers would fall into the Priority 5 to 9 Tiers and therefore be required to pay the higher price • Seeks to align with MPI's Fit for a Better World roadmap, to encourage innovation and support industry	• Tier-based pricing may create a pricing barrier, and likely impact demand • Willingness-to-pay analysis indicates that many 9(2)(b)(ii) would fall into Priority 5 to 9 tier, and could be unable to afford the higher price point • Does not provide options to importers • Additional administrative effort may be required to work with customers on understanding the impacts of tiered pricing. Uncertainty exists regarding the current system's capability to support tiered pricing	*Low utilisation*: 45%	*High utilisation*: 66%
Preferential Access Optionality *Allows importers to pay a premium for access and avoid the wait list*	• Achieves improved cost recovery through charging a higher price for premium access • Benefits those importers willing to pay a premium price for access, and avoid the wait list • Provides options for importers – those that can pay more, and are willing to for preferential access, can do so	• MPI would need to have high demand under the new pricing (e.g. a waitlist still exists) in order for importers to be willing to pay more for preferential access • Offers less flexibility to MPI from a demand perspective, making it difficult to anticipate demand for ring-fenced greenhouses, which may require reallocating greenhouses for general bookings • Introduces a need to consider broader changes to the L3B Greenhouse Booking and Prioritisation Policy	*Scenario 1 + preferential access:* 59%	*Scenario 3 + preferential access:* 52% to 70%

Cost recovery calculation assumes a total annual cost of $3,647,311 to operate 27 greenhouses

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